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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/670,792	09/26/2003	Kazuhiko Nagano	Q77647	4366

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EXAMINER

GOLUB, MARCIA A

ART UNIT	PAPER NUMBER
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2828

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	03/05/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No. 10/670,792	Applicant(s) NAGANO ET AL.	
	Examiner Marcia A. Golub	Art Unit 2828	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 December 2006.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 and 15-18 is/are pending in the application.
- 4a) Of the above claim(s) 5-8 and 16-18 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4, 9, 10 and 15 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

Applicant's election without traverse of Figs 4 and 5 (claims 1-4, 9, 10 and 15) in the reply filed on 12/1/06 is acknowledged.

Response to Arguments

Applicant's arguments filed 9/20/06 have been fully considered but they are not persuasive. In particular, examiner points to page 2 of the final office action mailed on 4/20/06 where the argument regarding claim 2 is addressed.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 1-4, 9, 10 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lang et al. (6,240,116) hereinafter '116, and further in view of Bylsma et al. (6,091,756) hereinafter '756.

Regarding **claim 1**, Fig 14 of '116 discloses "a laser apparatus comprising:
a stepped shape block [800a] formed with a plurality of mount portions [804a] which have different heights and are arranged a first direction [horizontal] parallel to an optical axis in order of height;

a plurality of sets of a collimator-lens array [807a] and a plurality laser diodes [805a] where the collimator-lens array in each of the plurality of sets is constituted by a plurality of collimator lenses which are arranged along a second direction [vertical] and collimate laser beams [811a] emitted from the plurality of laser diodes in each of the plurality sets;

wherein said plurality of laser diodes [805a] and collimator-lens array [807a] in each of the plurality of sets are fixed to one of the plurality of mount portions [804a] so that light-emission points of the plurality of laser diodes in each of the plurality of sets

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are aligned in a second direction [vertical];

wherein each of the sets of collimator lens array [807a] and each of the plurality of laser diodes [805a] is mounted on a mount portion [804a]; (9/45-47)

wherein the mount portions [804a] on which each of the sets of collimator lens array [807a] are mounted have vertical heights different from the vertical heights of the mount portions on which the plurality of laser diodes [805a] are mounted; (Lenses mounted on one of the blocks are positioned at a different height than the lasers mounted on any other block. In addition Fig 6 discloses mounting lenses such that the lower portion of the lens is below the lower portion of the laser. Also, since the laser diodes are mounted on submounts [106] they are positioned higher than the lenses.)

and wherein the mounts portions [804a] on which the sets of a collimator lens array [807a] are mounted regulate the vertical position of each of the collimator lenses in each of the sets of a collimator lens array." (the vertical position of each set of lenses is regulated since they are positioned on a different steps)

'116 does not disclose:

"wherein the block is a single, solid unit".

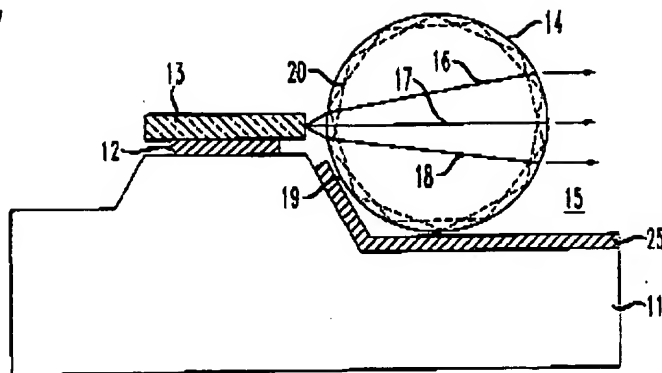
However, Fig 1 of '756 discloses a solid block [11] with a stepped surface used to mount to laser diode [13] and a collimating lens [14] to an upper surface such that the laser is located at a different height than the lens.

It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the teachings of '756 into the device of '116 by making the stepped block to be a solid unit as suggested by 11/61-65 of '116. Also, it has been held to be within the ability of one of ordinary skill in the art to make integral that which has been made separable previously, see MPEP 2144.04.

Regarding **claims 2-4, 9, 10 and 15**, Fig 14 of '116 and Fig 1 of '756 disclose a laser apparatus as described above:

2. "wherein a bottom surface of said collimator-lens array [807a,14] in said each of said plurality of sets is fixed to an upper surface [809a, 25] of said one of said plurality of mount portions [804a,11] so that the collimator-lens array is supported by the upper surface of said one of said plurality of mount portions;(9/45-47 of '116 and 2/3-8 of '756)

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3,4. "wherein said plurality of laser diodes [708] in each of the plurality of sets is fixed to a surface of one of the plurality of mount portions [704], and reference marks [702] which indicate fixation positions of the plurality of laser diodes [708] are arranged on said surface [704] of said one of the plurality of mount portions; (Fig 12)

9,10. wherein said plurality of laser diodes in each of the plurality of sets are each a single-cavity laser diode chip having a single light-emission point; (Fig 9)

15. "wherein the block is a heat block" (7/60-65 of '116)

Contact Info

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marcia A. Golub whose telephone number is 571-272-8602. The examiner can normally be reached on M-F 9-6 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Minsun Harvey can be reached on 571-272-1835. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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